

CURRICULUM VITAE



Personal information

• *Personal*

- Dr. Souheyla GAGUI
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- Google Scholar: <https://scholar.google.com/citations?hl=en&user=c9ZbpSIAAAA>
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Education

- **Ph.D.'s degree** in April 2016, Badji Mokhtar University-Annaba.
- **Master's degree** in June 2010, Badji Mokhtar University-Annaba.
- **License's degree** in June 2008, Badji Mokhtar University-Annaba.

Functions and Affiliations

- **Associate professor**, Department of Material Sciences, University of Oum El Bouaghi

Teaching modules

- **2022/2023** : Nanotechnology, Mechanics, Electricity.
- **2019/2022**: Biophysics, Nanotechnology, Electricity.
- **2016/2019**: Optical physics, Biophysics.

International publications

- **S. Gagui**, H. Meradji, S. Ghemid, Y. Megdoud, B.Zaidi, B. Ul Haq, R. Ahmed, B. Hadjoudja, B.Chouial; «*First principles predictions of the physical properties of GaN_xAs_{1-x}: materials for futuristic optoelectronic devices*»; Pramana, 2023.
- **S. Gagui**, H. Meradji, S. Ghemid, Y. Megdoud, B.Zaidi, B. Ul Haq, R. Ahmed, B. Hadjoudja, B.Chouial; «*A study of the physical properties of GaN, GaP and their mixed ternary alloys for the applications in optoelectronics devices*»; Bulletin of Materials Science, <https://doi.org/10.1007/s12034-022-02883-2>. 2023.
- **S. Gagui**, H. Meradji, S. Ghemid, S. Naeem, B. Ul Haq, R. Ahmed, A. K. Kushwaha ; «*Analysis of phase stability, elastic, electronic, thermal, and optical properties of Sc_{1-x}Y_xN via ab initio methods*»; Journal of Molecular Modeling, 29 (2023) 14.

- A. Khadraoui, B. Zaidi, B. Hadjoudja, **S. Gagui**, N. Houaidji, B. Chouial, A. Chiban; «*Efect of gallium proportion on the structural, optical, and electrical properties of the $CuIn_{1-x}GaxSe_2$ compound*»; The International Journal of Advanced Manufacturing Technology, 123 (2022) 3329–3336.
- H. Bitam, B. Zaidi, B. Hadjoudja, C. Shekhar, **S. Gagui**, M. S. Ullah; «*Junction configuration effects on the photovoltaic parameters of $a-Si/Cu_2ZnSnS_4$ solar cells*»; Applied Solar Energy, 58 (2022) 198–202.
- B. Zaidi, C. Shekhar, B. Hadjoudja, **S. Gagui**, S. Zahra, M. A. Saeed; «*Simulation Study of Monolithic $MoSe_2$ /CIGS Tandem Solar Cells*»; Discover Materials, 1 (2021) 15.
- B. Zaidi, C. Shekhar, B. Hadjoudja, **S. Gagui**, M.A Saeed ;«*Efficiency Enhancement of Transition Metal Dichalcogenide Based Solar Cells*»; Transactions on Electrical and Electronic Materials, 22 (2021) 687–690.
- B. Zaidi,, M.S. Ullah, S. Zahra, C. Shekhar, **S. Gagui** ;«*Analysis of I-V-T characteristics of $CH_3NH_3PbBr_3$ Perovskite based Solar Cells*»; Journal of Nano- and Electronic Physics, 13 (5) (2021) 05016.
- H. Felfli, B. Hadjoudja, A. Khadraoui, **S. Gagui**, B. Zaidi, B. Chouial and A. Chibani;«*Crystal Growth of $CuGaSe_2$ Compound for Tandem Photovoltaic Devices*»; Physica Polonica A , 139 (2021).
- B. Zaidi, C. Shekhar, **S. Gagui**, K. Kamli, Z. Hadeif, B. Hadjoudja, and B. Chouial ;«*Annealing and Hydrogenation Effects on the Electrical Properties of Polysilicon Thin Films*»; Nanosistemi, Nanomateriali, Nanotehnologii, 19(2021) 133–138.
- **S. Gagui**, S. Ghemid, H. Meradji, B. Zaidi, S.A.Tahir, R. Ahmed, A. K. Kushwaha, B. Hadjoudja, B. Chouial; «*Tailoring of elastic, optoelectronic, and thermal properties of antimony doped indium phosphorus alloys for optoelectronic applications* »; Journal of Alloys and Compounds, 858 (2021) 157632.
- A. Bakiri, B. Zaidi, K. Aouadj, **S. Gagui**, M.S. Ullah ; «*Design and Simulation of $In_xGa_{1-x}N$ Based Solar Cells*»; Physica Polonica A, 139 (2021) 46-50.
- **S. Gagui**, S. Ghemid, H. Meradji, B. Zaidi, B. Amimour, S.A.Tahir, R. Ahmed, B. Chouial, B. Hadjoudja, A. K. Kushwaha; «*Ab-initio study on the phase transition, elastic, optoelectronic, and thermodynamic properties of $GaAs_{1-x}Sb_x$* »; Optik, 219 (2020) 165253.
- **S. Gagui**, H. Bendjeddou, H. Meradji, B. Chouial, B. Hadjoudja, S. Ghemid,R. Khenata, A. K. Kushwaha, D. P. Rai,S. Bin Omran, Xiaotian Wang; «*Phase stability and optoelectronic characteristics of $Ba_{1-x}Be_xS$: a DFT-based simulation*»; Journal of Molecular Modeling, 26 (2020) 147.
- **S. Gagui**, B. Zaidi, Y. Megdoud, B. Hadjoudja, B. Chouial,H. Meradji, S. Ghemid, C. Shekhar ; «*Ab-initio study of the structural and optoelectronic properties of $BaSe_{1-x}S_x$ alloys*»; Computational Condensed Matter, 22 (2020) e00433.
- B. Zaidi, N. Houaidji, A. Khadraoui, **S. Gagui**, C. Shekhar, Y. Ozen, K. Kamli, Z. Hadeif, M. Donmez, B. Comert, S. Ozcelik, B. Chouial, B. Hadjoudja; «*Structural, Optical and Electrical Properties of $Zn_xSn_{1-x}S$ Thin Films Deposited by Chemical Spray Pyrolysis*»; Journal of Nano Research, 61 (2020) 72-77.
- B. Zaidi, C. Shekhar, B. Hadjoudja, **S. Gagui**, B. Chouial; «*Optimization of highly efficient monolayer $MoSe_2$ based solar cells*»; Acta Physica Polonica A, 136 (2019) 495-497.

- B. Zaidi, S. Belghit, M.S. Ullah, B. Hadjoudja, A. Guerraoui, **S. Gagui**, N. Houaidji, B. Chouial, C. Shekhar; « *Investigation on Synthesis of MgO Powder by Liquid Phase method*»; Metallofiz. Noveishie Tekhnol. 41 (2019) 1121-1126.
- B. Zaidi, M.S. Ullah, B. Hadjoudja, **S. Gagui**, N. Houaidji, B. Chouial, C. Shekhar ; «*Role of TCO Films in Improving the Efficiency of CdS/MoS₂ Heterojunction Solar Cells*»; Journal of nano- and electronic physics, 11 (2019) 02030.
- B. Zaidi, I. Saouane, M. V. Madhava Rao, R. Li, B. Hadjoudja, **S. Gagui**, B. Chouial, A. Chibani; « *Matlab / Simulink Based Simulation of Monocrystalline Silicon Solar Cells*»; International Journal of Materials Science and Applications; 5 (2016) 11-15.
- B. Zaidi, B. Hadjoudja, C. Shekhar, B. Chouial, R. Li, M. V. Madhava Rao, **S. Gagui**, A. Chibani; «*Dopant Segregation and Heat Treatment Effects on the Electrical Properties of Polycrystalline Silicon thin Films*»; Silicon; 8 (2016) 513–516.
- **S. Gagui**, B. Hadjoudja, B. Chouial, B. Zaidi, Y. Kouhlane, N. Benslim, A. Chibani; «*Gallium concentration effects on the properties of CuIn_{1-x}Ga_xSe₂ ingots*»; Journal of optoelectronics and advanced materials; 17(2015) 670- 674.
- B. Zaidi, B. Hadjoudja, B. Chouial, **S. Gagui**, H. Felfli, A. Magramene, A. Chibani ; «*Effect of Secondary Annealing on the Electrical Properties of Polysilicon Thin Films*»; Silicon; 7 (2015) 293–295.
- B. Zaidi, B. Hadjoudja, B. Chouial, **S. Gagui**, H. Felfli, A. Chibani; « *Hydrogenation Effect on Electrical Behavior of Polysilicon Thin Films*»; Silicon, 7 (2015) 275–278.
- Y. Kouhlane, B. Chouial, **S. Gagui**, B. Hadjoudja and A. Chibani; « *Growth and study of CuIn_{1-x}Ga_xSe₂ chalcopyrite compounds for solar cell applications*»; Indian Journal of Physics; 88 (2014) 471–475.

Interests and Qualifications

- **Interests:** Semiconductors, Photovoltaics, Optoelectronics.
- **Qualifications:** DFT Calculations, Ab Initio Calculations, Wien2K.
- **Other:** Nanotechnology, Magnetic Materials and Magnetism.